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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/692,101	10/20/2000	KANAKO HONDA	107641	9113

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EXAMINER

CHOOBIN, BARRY

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 07/29/2004

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/692,101

Applicant(s)

KANAKO

Examiner

Barry Choobin

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-23 and 26-35 is/are rejected.
- 7) ☒ Claim(s) 3,24 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Species I, Fig. 1-17 in Paper No. 9 is acknowledged. The traversal is on the ground(s) that the subject matter of all species is sufficiently related that a thorough search for the subject matter of any one species would encompass a search for the subject matter of the remaining species. This is found persuasive. As a result, Election of Species Requirement is withdrawn.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on January 1, 2001 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

The term "reliability storage" in claims 6-17, 19, 21, 22, 29, 31-34 is a relative term, which renders the claim indefinite. The term "reliable storage" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The Examiner interpretation of a reliable storage section for storing, corresponds to column 2, lines 14-32 of Panter et al.

4. Accordingly claims 6-17, 19, 21, 22, 29, 31-34 are rejected under the second paragraph of 35 U.S.C. 112.

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Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-2, 4-23, 26-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Panter et al in view of Stam et al.

As to claims 1, 27, 28, 30 and 35, Panter et al disclose an information processing apparatus comprising:

at least one sensor section for detecting circumstances inside of a predetermined detection space and for capturing detection information pertaining to the circumstances detected (column 12, lines 22-30);

a parameter conversion section for determining, on the basis of the detection information output from the sensor section, a first parameter pertaining to an object located in a plurality of pixels for each of the at least one sensor section, the pixels corresponding to sub-divisions formed by dividing the detection space, and for assigning the first parameter to respective pixels (column 12, lines 22-38).

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Panter et al does not expressly disclose a parameter integration section for integrating the first parameter assigned to the pixels on a per-pixel basis, and for assigning second parameter to the pixels, the second parameter being a result of integration of the first parameter.

Stam et al disclose parameter integration section for integrating the first parameter assigned to the pixels on a per-pixel basis, and for assigning a second parameter to the pixels, the second parameter being a result of integration of the first parameter (column 15, lines 25-50).

Panter and Stam are combinable because they both are in same field of endeavor of image sensing for vehicle.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to provide the parameter integration section of Stam with Panter in order to increase the sensitivity of the image array sensor. The system is thus able to detect an oncoming vehicle sooner. This may be particularly advantageous as oncoming cars are likely to be traveling faster when the controlled vehicle is traveling faster (column 30, lines 63-66).

The suggestion/motivation for doing so would have been to increase the sensitivity and speed in processing an image in the field of view (column 30, lines 63-66).

Therefore, it would have been obvious to combine Stam with Panter.

As to claim 2, Stam et al disclose in a case where the detection information includes a parameter representing a position of the object (column 1, lines 50-65), the parameter conversion section performs the following operations for the sensor section,

(1) Selection of a pixel including the position of the object indicated by the detection, information output from the sensor section (column 21, lines 1-15), and

(2) assignment of first parameter produced from the detection information to only the selected pixel (column 21, lines 1-15).

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As to claim 4, Stam et al disclose at least one first parameter assign to the single pixel indicates presence of the object located in the pixel.

As to claim 5, Stam et al disclose one of the at least one first parameter assigned to the single pixel indicates the moving state of an object located in the pixel (a moving vehicle corresponds this limitation).

As to claims 6-17, 19, 21, 22, 29, 31-34, the Examiner interpretation of a reliable storage section for storing corresponds to column 2, lines 14-32 of Panter et al (refer to paragraph 3, above).

As to claim 20, Stam disclose a control information generation section for generating; from the integration information, control information pertaining to the object located within the detection space; and a processing execution section for executing an adaptive task using control information, wherein the control information is formed from parameters acceptable to the processing execution Section (Fig.11, Micro controller 1105).

As to claim 26, Stam et al disclose in a case where the sensor section is installed in a vehicle, the area of the detection space ahead of the vehicle is wider than the area of the detection space behind the vehicle, with reference to the travel direction thereof (column 35, lines 15-31).

As to claim 18, Stam et al disclose an adaptive task at a point in time when the ignition switch of the vehicle is brought into conduction (column 48, lines 29-42).

As to claims 23 and 30, Stam et al disclose in a case where the control information includes a parameter indicating the position of the edge of the object, the control information generation section determines the position of a pixel located at an outermost position in the area formed from the continuously-provided pixels, as the position of the edge of the object located in the area (column 21, lines 35-57).

Allowable Subject Matter

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7. Claims 3, 24-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 5195144 to Le Parquier et al.

US 2001/0019621 to Hanna et al.

US 2002/0097324 to Onuki.

US 6665010 to Morris et al.

US 2003/0103141 to Bechtel et al.

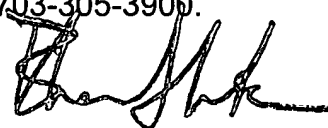
US 5351044 to Mathur et al.

CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barry Choobin whose telephone number is 703-306-5787. The examiner can normally be reached on M-F 7:30 AM to 18:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 703-308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



Barry Choobin

July 1, 2004

**BHAVESH M. MEHTA
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